DETAILED ACTION

Status of the Application

1. Receipt of the Response and Amendment after Non-Final Office Action filed 08/15/2011 is acknowledged.

2. Applicant has overcome the following rejections by virtue of the amendment/cancellation of the claims and/or persuasive remarks: (1) the objection to the specification has been withdrawn; (2) the 35 U.S.C. 112, second paragraph rejections have been withdrawn; and (3) the 35 U.S.C. 103(a) rejections of claims 1-8 have been withdrawn.

3. Claims 1-8 are pending in this action. New claims 9-14 have been added. Claims 1-8 have been cancelled. Claims 9-14 are currently under consideration. Claims 9-14 are newly rejected.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 9-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertocchi (U.S. 5,283,078, hereinafter "Bertocchi I") in view of Bertocchi (U.S. 4,643,085, IT 1199392, hereinafter "Bertocchi II") and Pepin et al. (FR 2,147,449).**

6. Regarding claim 9, Bertocchi I discloses a process for the extraction of juice from food pulp comprising the steps of: providing food pulps having a predetermined consistency (C2, L64); and providing a machine having a softening section having a first stator and a first rotor driven by a first rotor means that rotates the rotor at a first speed (C2, L47-C3, L2).

7. Bertocchi I does not disclose:

providing an input parameter relative to the consistency of the food pulps;

the machine having an extracting section having a second stator and a second rotor driven by a second rotor drive means that rotates the rotor at a second speed;

the machine having speed-adjusting means operatively connected to the first and second rotor-driving means, where the speed-adjusting means comprises a processor for receiving an input parameter;

entering the input parameter into the processor;

calculating a ratio between the first and second speed; or

actuating the first and second rotor-driving means according by the speed-adjusting means according to the ratio.

8. However, Bertocchi II discloses a machine having an extracting section having a second stator (C6, L30-L31, "cage…which carries the perforated metal strainer") and a second rotor (C5, L29) that rotates at a second speed. Bertocchi II further discloses speed-adjusting means operatively connected to rotor-driving means (C5, L27-L28; C3, L64-L65).

9. It would have been obvious to one having ordinary skill in the art to combine the softening section disclosed in Bertocchi I with the extracting section and speed-adjusting means operatively connected to rotor-driving means disclosed in Bertocchi II. Bertocchi I indicates the extracting section in the form of a strainer according to Bertocchi II is to be used in conjunction with the softening section disclosed in Bertocchi I (Bertocchi I, C3, L34-L36, L48-51), which a skilled practitioner would thus incorporate. Such combination would necessarily include incorporating the speed-adjusting means operatively connected to rotor-driving means disclosed in Bertocchi II, since the speed-adjustment mechanism was an integral component of the

invention disclosed in Bertocchi II (C3, L64-L65). While Bertocchi I indicates "[t]he device can function as an autonomous unit or it can be mounted as an inlet feeder on the same shaft as a strainer from which it receives motorization and of which it becomes an integral part," (C3, L48-L51) such integration is not imperative. A skilled practitioner would recognize the option of combining the device from Bertocchi I as an autonomous unit with that of Bertocchi II as a second autonomous unit, where both units would have independent rotor control capable of operating at a first speed and a second speed.

10. Further, Pepin et al. discloses that "[a]ll the described operations can be operated by remote control and directed by an operator, or to be automated following determined parameters by advance, according to the production zones, of the climatic conditions or the type of the fruits to treat, and following the juices which one wishes to obtain" (P5, L31-L35). As such, Pepin et al. effectively discloses the speed-adjusting means comprises a processor for receiving an input parameter and the step of entering the input parameter into the processor (i.e., "operations can be operated by remote control," which would inherently require a processor); calculating a ratio between the first and second speed (i.e., "determined parameters by advance, according to the production zones, of the climatic conditions or the type of the fruits," where predetermined parameters would include a ratio between the first and second speeds); and actuating the rotor-driving means with the speed-adjusting means according to the ratio (i.e., "[a]ll the described operations can be operated by remote control and directed by an operator") (P5, L31-L35).

11. It would have been obvious to one having ordinary skill in the art to combine the softening and extracting sections of Bertocchi I and Bertocchi II, respectively, with the actuation mechanism and pre-determined input parameters as disclosed in Pepin et al. Pepin et al. discloses

a process similar to the combination as disclosed in Bertocchi I and Bertocchi II, where the rotor-stator assemblies are replaced with screw extruders (Pepin et al., P3, L24-L35). However, the functionality of extracting juice from fruit is a common aim between both processes (Bertocchi I, Abstract; Pepin et al., P1, L1-L3). Automation as disclosed in Pepin et al. (P5, L31-L35) would improve the efficiency of the combined process disclosed in Bertocchi I and Bertocchi II, such efficiency being a goal of Bertocchi II which notes one of the advantages of the disclosed invention is maximization of juice extracted from a given fruit (Bertocchi II, C3, L62-L64). A skilled practitioner would thus incorporate actuation of the rotor-driving means according to a predetermined ratio for the first and second speeds based on the consistency of the food pulp when practicing the process as disclosed in Bertocchi II and Bertocchi I. Automation via remote control constitutes speed-adjusting means comprising means for receiving an input parameter through a processor, which would be necessary for automation. As a result of such direction by an operator, the subsequent step of actuating the rotor-driving means according to a predetermined input parameter would be completed.

12. Regarding claim 10, Bertocchi I discloses a machine for extracting juice from food pulp comprising a softening section having a first stator and a first rotor drive means that causes a first rotor to rotate at a first speed (C2, L47-C3, L2; C3, L48-L50, where a motor is implied).

13. Bertocchi I does not disclose an extracting section having a second stator and a second rotor drive means that causes a second rotor to rotate at a second speed; or a speed-adjusting means operatively connected to the first and second rotor drive means, the speed-adjusting means comprising a processor for receiving an input parameter relative to the consistency of the food pulp and for calculating a ratio between the first and second speed responsive to the input

parameter, the speed adjusting means arranged to operate the first and second rotor drive means according to the ratio.

14. However, Bertocchi II discloses a machine for extracting juice from food pulp comprising an extracting section having a second stator (C6, L30-L31, "cage…which carries the perforated metal strainer") and a second rotor driving means (C5, L10-L11) that causes a second rotor to rotate at a second speed (C5, L29; C3, L64-L65). Bertocchi II further discloses speed-adjusting means operatively connected to the rotor-driving means (C5, L27-L28; C3, L64-L65).

15. It would have been obvious to one having ordinary skill in the art to combine the softening section disclosed in Bertocchi I with the extracting section and speed-adjusting means operatively connected to the rotor-driving means disclosed in Bertocchi II. Bertocchi I indicates the extracting section in the form of a strainer according to Bertocchi II is to be used in conjunction with the softening section disclosed in Bertocchi I (Bertocchi I, C3, L34-L36, L48-51), which a skilled practitioner would thus incorporate. Such combination would necessarily include incorporating the speed-adjusting means operatively connected to rotor-driving means disclosed in Bertocchi II, since the speed adjustment mechanism was an integral component of the invention disclosed in Bertocchi II (C3, L64-L65). While Bertocchi I indicates "[t]he device can function as an autonomous unit or it can be mounted as an inlet feeder on the same shaft as a strainer from which it receives motorization and of which it becomes an integral part," (C3, L48-L51) such integration is not imperative. A skilled practitioner would recognize the option of combining the device from Bertocchi I as an autonomous unit with that of Bertocchi II as a second autonomous unit, where both units would have independent rotor control capable of operating at a first speed and a second speed.

16. Further, Pepin et al. discloses speed-adjusting means operatively connected to the first and second rotor drive means, the speed-adjusting means comprises a processor for receiving an input parameter (i.e., "operations can be operated by remote control," which would inherently require a processor) and calculating a ratio between the first and second speed (i.e., "or to be automated," where automation indicates the processor calculates the ratio between the first and second speeds) and the speed adjusting means is arranged to operate the first and second rotor drive means according to the ratio (P5, L31-L35; P3, L32-L35, "The various screws that equipment comprises have each one a step which corresponds [to an operation] to carry out. These screws are [on] tees on shafts 3 and 4 coaxial with the enclosure and pulled by motors 5 and 6….").

17. It would have been obvious to one having ordinary skill in the art to combine the softening and extracting sections and motors of Bertocchi I and Bertocchi II, respectively, with the speed-adjusting device and input parameters as disclosed in Pepin et al. Pepin et al. discloses a process similar to the combination of machines as disclosed in Bertocchi I and Bertocchi II, where the rotor-stator assemblies are replaced with screw extruders (Pepin et al., P3, L24-L35). However, the functionality of extracting juice from fruit is a common aim between both processes (Bertocchi I, Abstract; Pepin et al., P1, L1-L3). Automation as disclosed in Pepin et al. (P5, L31-L35) would improve the efficiency of the combined process disclosed in Bertocchi I and Bertocchi II, such efficiency being a goal of Bertocchi II which notes one of the advantages of the disclosed invention is maximization of juice extracted from a given fruit (Bertocchi II, C3, L62-L64). A skilled practitioner would thus incorporate a speed-adjusting means according to a

predetermined ratio for the first and second speeds based on the consistency of the food pulp when operating a machine as disclosed in Bertocchi II and Bertocchi I.

18. As for claim 12, Pepin et al. discloses a machine wherein the first and second rotor drive means have axes shifted from each other (P4, L33-L34, describing motors 50 and 51 in Fig. 2).

19. As for claim 13, Pepin et al. discloses a machine wherein the first and second motors are coaxial (P3, L33-L35, describing motors 5 and 6 in Fig. 1).

20. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bertocchi (U.S. 5,283,078, hereinafter "Bertocchi I") in view of Bertocchi (U.S. 4,643,085, hereinafter "Bertocchi II") and Pepin et al. (FR 2,147,449) as applied to claim 10 above, and further in view of Johnston (U.S. 6,550,376 B1).**

21. Regarding claim 11, Bertocchi I, Bertocchi II and Pepin et al. disclose a machine according to claim 10, as described previously.

22. Bertocchi I, Bertocchi II and Pepin et al. do not disclose the speed-adjusting means as either frequency variators or mechanical gearboxes.

23. However, Johnston discloses use of a mechanical gearbox (C2, L50-L53).

24. It would have been obvious to one having ordinary skill in the art to combine the mechanical gearbox disclosed in Johnston with the machine disclosed in Bertocchi I, Bertocchi II and Pepin et al. Johnston is drawn to a similar machine as that disclosed in Bertocchi I, Bertocchi II and Pepin et al., which is also used for extracting juice from food pulp (C1, L7-L12). Mechanical gearboxes are also well known in the art for adjusting output from a motor to a desired speed. A skilled practitioner would incorporate a mechanical gearbox for adjusting the speed of the machine disclosed in Bertocchi I, Bertocchi II and Pepin et al.

25. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bertocchi (U.S. 5,283,078, hereinafter "Bertocchi I") in view of Bertocchi (U.S. 4,643,085, hereinafter "Bertocchi II") and Pepin et al. (FR 2,147,449) as applied to claim 10 above, and further in view of Wallace et al. (U.S. 3,778,209).**

26. Regarding claim 14, Bertocchi I, Bertocchi II and Pepin et al. disclose a machine according to claim 10, as described previously, wherein the first rotor is mounted on a first shaft and the second motor is mounted on a second shaft, the shafts being coaxial. Pepin et al. further discloses the two shafts as being capable of having speeds independent from each other and of bearing different workloads (P2, L12-L17, "The invention also has as an object an equipment for the realization of the method above. This equipment comprises an enclosure, provided with sluice to each one of its ends and includes/understands notably shaped members of screw whose step is different following the stage of the processing, the shafts of [driving] of these screws being able to turn at different rates.").

27. Bertocchi I, Bertocchi II and Pepin et al. do not disclose the two shafts being pivotally engaged within or on one another.

28. However, Wallace et al. discloses two shafts being pivotally engaged within one another (C2, L63-L66).

29. It would have been obvious to one having ordinary skill in the art to incorporate the engagement mechanism disclosed in Wallace et al. with the machine disclosed in Bertocchi I, Bertocchi II, and Pepin et al. Wallace et al. is directed toward a similar food processing apparatus involving extruding a food product (C1, L32-L37) wherein two rotating shafts engaged with one another are needed to rotate independently (C2, L63-L66). A skill practitioner would

thus incorporate the mechanism disclosed in Wallace et al. at the point of engagement between the two shafts of the machine disclosed in Bertocchi I, Bertocchi II, and Pepin et al. such that the two shafts may support one another, yet rotate independently. Further, while Pepin et al. does not specifically disclose two shafts which are pivotally engaged within on another, disclosure is made to the effect that the ends of the two independently rotating shafts are in close proximity (Fig. 1, shaft 3 and shaft 4 to immediate left of shutter 18) and that shutter 18 is optional (P4, L11-L13, "Between each screw conventional shutters represented schematically into 17[, 18, 19, 20, and 21] can be optionally envisaged…") While such shafts may be left to operate without additional support as disclosed in Fig. 2 between shafts 37 and 40, a skilled practitioner would seek to stabilize the two shafts by reinforcing them to one another at the junction.

Response to Arguments

30. **Claim Objections:** Applicant has overcome the objection to the specification based on amendment to the Abstract. Accordingly, the objection has been withdrawn.

31. **Claim Rejections - 35 U.S.C. § 112:** Applicant has overcome the 35 U.S.C. § 112, second paragraph rejections based on cancellation of the claims. Accordingly, the 35 U.S.C. § 112, second paragraph rejections have been withdrawn.

32. **Claim Rejections - 35 U.S.C. § 103(a) of claims 1-4 and 6-7 over Bertocchi I, Bertocchi II, and Pepin et al.:** Applicant argued (in single-space type throughout):

> Machines like Bertocchi I and Bertocchi II can operate separately, as independent units. No hint is given in the prior art to combine such machines in the way defined by the presently amended claims.

33. Contrary to Applicant's argument, Bertocchi I indicates the extracting section according to Bertocchi II is to be used in conjunction with the softening section disclosed in Bertocchi I

(Bertocchi I, C3, L34-L36, L48-51, "[t]he device can function as an autonomous unit or it can be mounted as an inlet feeder on the same shaft as a strainer from which it receives motorisation and of which it becomes an integral part").

34. Applicant further argued:

> The closest prior art is that acknowledged by the Applicant in Figure 1 of the present application, and described in the specification with reference to that Figure.
>
> A problem arises in Figure 1 in choosing the proper intensity of the smashing and extracting action.
>
> The technical problem of Bertocchi I, as clearly stated in the application at page 2, lines 25-30, is that even if good results are achieved for all those vegetables that, owing to a low consistency of their pulp (i.e. apples, peaches, pears, apricots), can be easily softened, it is less suitable for products having higher consistency (i.e. carrots, quinces, etc.) that require a stronger softening action to reach a high efficiency in the following extraction step.
>
> In particular, in the case of a vegetable having a pulp with a low consistency (e.g. strawberry, peaches, pears, apricots) a strong softening must be avoided for the following reasons:
>
> - the greatest part of the vegetable, and in particular the seeds and the peels, tends to pass through the sieve, "polluting" the juice.
> - its organoleptic properties and its final aspect are modified;
>
> Instead, in the case of a vegetable having a pulp with a high consistency (e.g. carrots, quinces, etc.) a stronger softening action must be carried out because if a such vegetable is not sufficiently softened, when it is submitted to the extraction step, a very small part of the vegetable tends to pass through the sieve and the waste product contains a great amount of puree or juice. Therefore the yield of the process is drastically reduced.
>
> The main aim of the present invention is to provide a very flexible and versatile machine that is able to treat a great variety of different vegetables obtaining for all the treated varieties excellent organoleptic properties and optimizing the yield of the process.
>
> The above described aim is obtained controlling the speed of the softening step, i.e. the speed of rotation of the first rotor inside the stator depending on the kind of vegetable to treat. This is obtained controlling the first motor, without affecting the speed of the extraction step through the sieve obtained by a second motor that operates the second rotor.
>
> No indication in either Bertocchi I or Bertocchi II can be found for such a solution.

35. As for the intensity of the rotors in the smashing and extracting steps, the only adjustable parameter is the speed at which the rotor driving means operate. Such speeds are result-effective

variables, where a skilled practitioner would understand softer foods would necessitate slower processing speeds in order to prevent excessive pulverization of the food products and harder foods would require faster processing speeds in order to adequately soften the food. As stated previously in the claim rejections, the input parameters are considered obvious to one having ordinary skill in the art in light of the disclosure in Pepin et al. that states: "operations can be …automated following determined parameters by advance, according to the production zones, of the climatic conditions or the type of the fruits to treat" (P5, L31-L34). Thus, depending on the type of fruit to be treated, a practitioner would pre-determine operating parameters of the machine. Further, the disclosures of Bertocchi I, Bertocchi II and Pepin et al. indicate the presence of two rotor driving means which may either be on the same axis or on different axes. A skilled practitioner would understand the two rotors may be driven at different speeds depending on the particular food being processed.

36. Applicant further argued:

> The Pepin et al. reference does not fill the gaps left by Bertocchi I and Bertocchi II.
>
> Pepin et al. discloses two different embodiments of a machine for extracting juice from fruit. A softening or smashing step is not provided in Pepin et al., neither in the first embodiment nor in the second embodiment of the extraction apparatus of Pepin et al. In the first embodiment shown in Figure 1, the extraction apparatus comprises a sieve inside of which a rotor rotates about a longitudinal axis. During the extraction step, the liquid part of the grapes pass through the sieve and is discharged through ducts (9, 9a, 9b). The solid parts of the grapes pass through six successive sections of the rotor having different characteristics. A first shaft, driven by a first motor 5, and a second shaft, driven by a second motor 6, are coaxially arranged. In particular, the first shaft comprises two screw-sections 10a and 11a and the second shaft comprises four screw-sections 12a-15a. The solid parts which do not pass through the sieve are discharged through an exit 16.
>
> In the second embodiment of Pepin et al., shown in Figure 2, the extraction apparatus comprises a first extraction section provided with a first screw that rotates about a first shaft 33 and that carries out a first extraction step for separating the solid parts which are discharged through an exit and the liquid part, i.e. the juice which passes through the sieve and it is submitted to a successive extraction step.

> Therefore there is no reason for a skilled person to look at Pepin et al. for solving the above-disclosed technical problem. However, even when considering Pepin et al., a skilled person could not obviously obtain the subject-matter of the claims from a combination of Bertocchi I, Bertocchi II and Pepin et al. In particular, no hint can be found in Pepin et al. for actuating the first and the second rotor driving means by a speed adjusting means in such a way that a predetermined ratio between the first and the second speed of the first and the second rotor is obtained, responsively to an input parameter relative to the consistency of the food pulps.

37. Regarding independent claims 9 and 10, Pepin et al. is relied on as prior art for its disclosure regarding speed-adjusting means (including a processor) which actuate the rotor-driving means according to the predetermined ratio. Thus, Pepin et al. need not disclose those claim limitations that were disclosed in the other prior art references, such as the softening step that is disclosed in Bertocchi I. Also, Pepin et al. does disclose that parameters are determined in advance according to the types of fruits to be treated (P5, L32-L34), where any the actuation of the rotor-driving means according to the predetermined parameters will result in the first and second speeds correlating to a predetermined ratio. The combination of the three references thus renders the independent claims obvious to one having ordinary skill in the art for the reasons stated previously in the claim rejections.

Conclusion

38. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

39. Claims 9-14 are rejected.

40. No claims are allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY MORNHINWEG whose telephone number is (571)270-5272. The examiner can normally be reached on Monday-Friday, 8:00AM-5:30PM, EST, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Humera Sheikh can be reached on (571) 272-0604. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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